

**SOKOINE UNIVERSITY OF AGRICULTURE  
MOROGORO**



**JOB OPPORTUNITY**

The Management of Sokoine University of Agriculture (SUA) wishes to invite suitable qualified individuals, who are able to work full time in a dynamic academic environment to apply for three (3) positions at the SACIDS Foundation for One Health. The Postdoctoral Research Fellow in Bioinformatics and Laboratory Manager will be recruited under the SACIDS Africa Centre of Excellence for Infectious Diseases of Humans and Animals in Eastern and Southern Africa (SACIDS-ACE), an initiative of the Government of the United Republic of Tanzania and the World Bank. The Laboratory Technologist will be recruited under the Skoll Foundation award to the SACIDS Foundation for One Health to Strengthen SACIDS and Regional Coronavirus Disease 2019 (SACIDS COVID-19) Emergency Preparedness in Eastern and Southern Africa.

**1. POSTDOCTORAL RESEARCH FELLOW IN BIOINFORMATICS (1 POST)**

**QUALIFICATIONS/EXPERIENCE:**

- Possession of PhD in Bioinformatics/Computational Biology or equivalent qualifications from a recognized University.
- Ability to independently conduct next-generation sequencing using whole genome sequencing platforms, such as Oxford nanopore sequencing, 454 pyrosequencing, Illumina sequencing, Ion Torrent semiconductor sequencing and/or PacBio sequencing.
- At least two publications in reputable journals relating to whole genome sequencing of viruses and other pathogens and/or vectors, including antimicrobial resistance.
- Ability to perform genome assembly and bioinformatics of viruses and other pathogens and/or vectors, including antimicrobial resistance.
- Good communicator (orally and written, in English) with strong interpersonal skills and leadership qualities.

**DUTIES AND RESPONSIBILITIES:**

- Undertake one health-driven genomic epidemiology and/or host-pathogen interaction, including antimicrobial resistance. Provide genomic expertise to other SACIDS groups working on specific disease research theme.
- Conduct complete genome sequencing of human and animal viruses, and other pathogens and/or vectors, including antimicrobial resistance using next-generation sequencing platforms.
- Conduct the genomic epidemiology of human and animal viruses, and other pathogens and/or vectors, including antimicrobial resistance.
- Conduct metagenomic sequencing of pathogens in human and animal samples in order to understand co-morbidity patterns of the disease, and broader surveillance of outbreaks in a population.
- Support partner institutions of the SACIDS Foundation for One Health to commission the use of next-generation sequencing platforms and bioinformatics.
- Train SACIDS partner institutions staff in the use of next-generation sequencing platforms.
- Performing any other related duties as assigned by the Leader of the SACIDS Africa Centre of Excellence for Infectious Diseases.
- Report to the SACIDS-ACE Leader.

**AGE:** Not above 45 years at the time of application.

**DURATION:** Two year contract, renewable depending on availability of funds.

**DUTY STATION:** SACIDS Foundation for One Health at Sokoine University of Agriculture in Morogoro, Tanzania.

The applicant will have opportunity to interact with other relevant units at SUA and within Tanzania, and to interact with regional SACIDS partner institutions in Democratic Republic of the Congo, Mozambique and Zambia.

**SALARY:** An attractive salary based on SUA salary scales with adjustment as offered by SACIDS-ACE.

## **2. LABORATORY MANAGER (1 POST)**

### **QUALIFICATIONS/EXPERIENCE:**

- Possession of Master of Philosophy (MPhil)/Master of Science by Research (MRes) or equivalent qualifications from a recognized University.
- Experience with working in multidisciplinary research laboratory dealing with the isolation and characterization of pathogens.
- Experience with supervision of postgraduate student's molecular biology, microbiology and/or virological research.
- Familiarity with COVID-19 diagnosis using real-time reverse transcription polymerase chain reaction.
- Familiarity with laboratory management.
- Ability to initiate work independently and be able to work as part of a team.
- Good communicator (orally and written, both English and Swahili) with strong interpersonal skills and leadership qualities.
- Computer literate, with experience in writing reports and use of Microsoft Word, Microsoft Excel, Microsoft Power Point and Photo editing software such as Picasa or Adobe Photoshop.

**DUTIES AND RESPONSIBILITIES:**

- Assist SACIDS postgraduate students and postgraduate research fellows in conducting their research, including but not limited to, nucleic acid extraction, nucleic acid amplification, PCR products electrophoresis, DNA sequencing and virus isolation in cell cultures.
- Maintain continuous cell cultures and prepare primary cells for use in virus isolation, viral passages, virus neutralization tests and immunoperoxidase monolayer assay.
- Maintain an electronic inventory of all samples in the laboratory using available computer software.
- Maintain a ledger of all reagents and supplies in the laboratory using available ledger books linked to an electronic database.
- Develop and ensure adherence to standard operating procedures in the laboratory.
- Ensure that all equipment are in good working condition including daily charting of refrigerators, freezers and ultralow freezers, and recording daily use of equipment.

- Performing any other related duties as assigned by the Leader of the SACIDS Africa Centre of Excellence for Infectious Diseases.
- Report to the SACIDS-ACE Leader.

**AGE:** Not above 40 years at the time of application.

**DURATION:** Two year contract, renewable depending on availability of funds.

**DUTY STATION:** SACIDS Foundation for One Health at Sokoine University of Agriculture in Morogoro, Tanzania.

The applicant will have opportunity to interact with other relevant units at SUA and within Tanzania, and to interact with regional SACIDS partner institutions in Democratic Republic of the Congo, Mozambique and Zambia.

**SALARY:** An attractive salary based on SUA salary scales with adjustment as offered by SACIDS-ACE.

### **3. LABORATORY TECHNOLOGIST (1 POST)**

#### **QUALIFICATIONS/EXPERIENCE:**

- Possession of Master of Science in Molecular Biology and Biotechnology/Master of Science in Molecular Biology/Master of Science in One Health Molecular Biology/Master of Philosophy (MPhil) in Molecular Biology or equivalent qualifications from a recognized University.
- Established practical experience in conducting next-generation sequencing using Oxford nanopore next-generation sequencing platform especially on the use of Flongle, MinION, MinIT and MinION Mk1C.
- Co-authorship in at least two journal publications for next-generation sequencing, especially with viruses, using Oxford nanopore next-generation sequencing.
- Ability to independently sequence viruses such as severe acute respiratory syndrome coronavirus 2 (SARS CoV-2) using Oxford nanopore next-generation sequencing platform.
- Familiarity with viral genome assembly and bioinformatics workflows for SARS-CoV-2 will be an added advantage.

- Ability to initiate work independently and be able to work as part of an emergency team for COVID-19.
- Good communicator in English with strong interpersonal skills and leadership qualities.

**DUTIES AND RESPONSIBILITIES:**

- Conduct complete genome sequencing of human and animal viruses, and bacteria including antimicrobial resistance using Oxford nanopore sequencing platform.
- Conduct rapid Oxford nanopore sequencing and bioinformatics of the SARS-CoV-2 virus.
- Conduct the genomic epidemiology of the SARS-CoV-2 virus in relation to other viral strains such as Nextstrain (<https://nextstrain.org/ncov>).
- Conduct direct RNA sequencing of SARS-CoV-2 virus in order to provide insights into the transcriptome and base modifications of the virus.
- Conduct metagenomic sequencing of in order not only to characterise the SARS-CoV-2 virus, but other pathogens or microorganisms present in the sample in order to understand co-morbidity patterns of the disease, and broader surveillance of outbreaks in a population.
- Train SACIDS partner institutions staff in the use of Oxford nanopore sequencing platform.
- Performing any other related duties as assigned by the Leader of the SACIDS Africa Centre of Excellence for Infectious Diseases.
- Report to the Executive Director of the SACIDS Foundation for One Health and work under the direct supervision of the Leader of the SACIDS Africa Centre of Excellence for Infectious Diseases.

**AGE:** Not above 40 years at the time of application.

**DURATION:** Nine month contract, with possibility of extension depending on availability of funds.

**DUTY STATION:** SACIDS Foundation for One Health at Sokoine University of Agriculture in Morogoro, Tanzania.

The applicant will have opportunity to interact with other relevant units at SUA, Tanzania National Health Laboratory and regional SACIDS partner institutions in Democratic Republic of the Congo, Mozambique and Zambia.

**SALARY:** An attractive salary based on SUA salary scales with adjustment as offered by the SACIDS COVID-19 project.

**NOTE:**

All applications should be addressed to the Deputy Vice Chancellor (Administration and Finance), Sokoine University of Agriculture, P.O. Box 3000, Chuo Kikuu, Morogoro within 10 days from the date of this advertisement.

**HOW TO APPLY:**

The application letters (hand written in English) should indicate names and addresses of two (2) Referees with their reliable contacts, together with certified copies of academic certificates, academic transcripts and all credentials i.e. Form IV, Form VI, University, Birth Certificate, Curriculum Vitae and other testimonials like the National/Citizenship Identification Card.